

REMARKS

The Examiner rejected claims 2-13, 17, 32, 34-37 and 40-43 under 35 U.S.C. § 101.

The Examiner rejected claims 2-13, 17, 32, 34-37 and 40-43 under 35 U.S.C. § 112, first paragraph.

Applicants respectfully traverse the § 101 and § 112 rejections with the following arguments.

35 U.S.C. § 101

The Examiner rejected claims 2-13, 17, 32, 34-37 and 40-43 under 35 U.S.C. § 101, alleging that “the claimed invention is not supported by either a specific and substantial asserted utility or a well established utility.”

The Examiner argues: “Claims 4 and 17 have been amended to contain the language “the removable adhesive consists of a liquid while adhesive coupling the successive sheets to each other”. There is no support in the specification to show how the adhesive functions as a liquid and how the liquid adhesive stays in place in between the sheets. The specification is silent with regard to how the liquid adhesive is placed in between the sheets of material and how it is removed once the holes are drilled. In paragraph 0042 of the Applicant's specification, the removal of the other types of adhesive is discussed, but the liquid adhesive is not mentioned”.

In response to the preceding argument by the Examiner, Applicants cite page 1, lines 8-13 of Applicants’ specification for the following indication of problems with the prior art: “A stack of sheets may be adhered together around a periphery of each sheet using an adhesive such as a glass cloth impregnated with epoxy. **Hole burring** occurs as a drill passes through the stack. Additionally, **each sheet separates** from an adjacent sheet as the drill passes between the sheets. This results in the whole stack of sheets expanding” (emphasis added).

Applicants argue next that the invention of claims 4 and 17 has the utility of overcoming the aforementioned problems of the prior art.

A first argument by Applicants relates to the invention of claims 4 and 17 having the utility of preventing sheet separation as the drill passes through the stack. Applicants’

specification recites on page 11, cols. 13-20 that “the removable adhesive 16A-16K may comprise a thin layer of water. The surface tension of the thin layer of water between each sheet 14A-14L of the laminated structure 10A holds the laminated structure 10A together while the hole 102 is drilled. Each sheet 14A-14L is peeled off the laminated structure 10A and rinsed in additional water to remove any material particles. Then, each sheet 14A-14L is dried.”

The preceding quote from Applicants’ specification indicates that the invention of claims 4 and 17 have the utility of **each sheet not separating** from an adjacent sheet as the drill passes between the sheets, in contrast with the prior art.

In addition, the preceding quote from Applicants’ specification states that the surface tension of the thin layer of water holds the sheets together, which overcomes the Examiner’s allegation that “[t]here is no support in the specification to show how ... the liquid adhesive stays in place in between the sheets.

In addition, Applicants respectfully contend that the issue of how the liquid adhesive is removed once the holes are drilled is irrelevant to the aforementioned utility, because the utility of each sheet not separating from an adjacent sheet as the drill passes between the sheets will be achieved by the invention of claims 4 and 17 even if the liquid adhesive is not removed once the holes are drilled. Nonetheless, the preceding quote from Applicants’ specification states that the sheets are peeled off the laminated structure, which overcomes the Examiner’s allegation that “[t]he specification is silent with regard to how the liquid adhesive ... is removed once the holes are drilled.

Applicants assert that the Examiner’s allegation that “[t]he specification is silent with regard to how the liquid adhesive is placed in between the sheets of material” is irrelevant to the

aforementioned utility, because claims 14 is a structure claim and is not claiming a method step of placing the liquid adhesive in between the sheets of material. Nonetheless, Applicants' specification on page 5, lines 5-12 states that the adhesive is placed between the sheets of material by being "applied" between the sheets, wherein the adhesive may be liquid ("A removable adhesive 16A-16K is **applied** between each sheet 14A-14L, respectively.... The removable adhesive 16A-16K may comprise any suitable material (e.g., fructose, sucrose, water soluble polymers, water, etc.). The material may comprise any suitable form (e.g., powdered fructose, **a liquid**, a liquid solution, etc.)" (emphasis added).

Applicants assert that the Examiner's allegation that "[t]here is no support in the specification to show how the adhesive functions as a liquid" is unclear and confusing, since claims 4 and 17 do not recite that the adhesive must function as a liquid. Claims 4 and 17 state that the adhesive is a liquid that must function as an adhesive.

A second argument by Applicants relates to the invention of claims 4 and 17 having the utility of **preventing burr formation** as the drill passes through the stack. The preceding utility of preventing burr formation is specifically recited in claims 4 and 17 as follows:

"wherein the first and second layers are adapted to prevent burr formation in a hole subsequently drilled through the stack" (claim 4); and

" wherein each intermediate layer is adapted to prevent burr formation in a hole subsequently drilled through the stack" (claim 17).

Applicants note that the utility of preventing burr formation does not depend on the removable adhesive consisting of a liquid. The flow chart of FIG. 7 depicts the process of the

present invention for producing a burr free hole any removable adhesive stated in the Applicants' specification. See specification, page 8, line 19 - page 9, line 6 ("FIG. 7 illustrates a flow chart of a method for producing a burr free hole 102 in each sheet 14 of the stack 12B (FIGS. 5 and 6).... As mentioned above, the removable adhesive 16 may comprise any suitable material (e.g., fructose, sucrose, water soluble polymers, water, water solutions, etc.)."

The Examiner has associated lack of utility of claims 4 and 17 with the fact that claims 4 and 17, as amended in the immediately preceding office action response, require that the removable adhesive consist of a liquid. However, since the specification indicates that the utility of preventing burr formation does not depend on the removable adhesive consisting of a liquid, the Examiner's basis for introducing the lack of utility rejection under 35 U.S.C. § 101 in the current office action, as a consequence of Applicants' amendment in the immediately preceding office action response, is not persuasive.

Based on the preceding arguments, Applicants respectfully contend that claims 4 and 17 are not unpatentable for lack of utility under 35 U.S.C. § 101. Since claims 2-13, 32, and 34-37 depend from claim 4, Applicants respectfully contend that claims 2-13, 32, and 34-37 are likewise not unpatentable for lack of utility under 35 U.S.C. § 101. Since claims 40-43 depend from claim 4, Applicants respectfully contend that claims 40-43 are likewise not unpatentable for lack of utility under 35 U.S.C. § 101.

35 U.S.C. § 112, First Paragraph

The Examiner rejected claims 2-13, 17, 32, 34-37 and 40-43 under 35 U.S.C. § 112, first paragraph.

The Examiner argues: “Claims 2 – 13, 17, 32, 34 – 37 and 40 – 43 are also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either a specific and substantial asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.”

In response, Applicants respectfully contend that is incorrect to conclude that one skilled in the art clearly would not know how to use an invention if the invention lacks utility. If the written description adequately teaches how to use the invention, then one skilled in the art would know how to use the invention even if the invention lacks utility. One could argue, however, that one skilled in the art would not be motivated to use an invention lacking utility. Therefore, Applicants respectfully contend that the Examiner has erroneously equated lack of motivation to use an invention with lack of knowledge of how to use the invention.

Nonetheless, Applicants’ arguments *supra* in conjunction with the rejection of claims 2-13, 17, 32, 34-37 and 40-43 under 35 U.S.C. § 101 have established that claims 2-13, 17, 32, 34-37 and 40-43 do not lack utility.

Based on the preceding arguments, Applicants respectfully contend that claims 2-13, 17, 32, 34-37 and 40-43 are not unpatentable under 35 U.S.C. § 112, first paragraph.

CONCLUSION

Based on the preceding arguments, Applicants respectfully believe that all pending claims and the entire application meet the acceptance criteria for allowance and therefore request favorable action. If the Examiner believes that anything further would be helpful to place the application in better condition for allowance, Applicants invites the Examiner to contact Applicants' representative at the telephone number listed below. The Director is hereby authorized to charge and/or credit Deposit Account 09-0457.

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